

Supplementary material

Predation of European catfish on anadromous fish species in an anthropised area

Nicolas Guillerault^{A,B}, Stéphanie Boulêtreau^A and Frédéric Santoul^{A,C}

^AEcoLab, Université de Toulouse, CNRS, INPT, UPS, F-31 062 Toulouse, France.

^BStation d'Ecologie Expérimentale et Théorique, CNRS, UPS, UMR 5321, F-09200 Moulis, France.

^CCorresponding author. Email: frederic.santoul@univ-tlse3.fr

Table S1. Electrofishing sampling numbers

Data are the number of number of individuals for the nine main species (sample surface for each station: 1250 m²)

	Barbel (<i>Barbus barbus</i>)	Bleak (<i>Alburnus alburnus</i>)	Bream (<i>A brama</i> + <i>B bjoerkna</i>)	Chub (<i>Squalius cephalus</i>)	Crucian carp (<i>Carassius carassius</i>)	Eel (<i>Anguilla anguilla</i>)	Gudgeon (<i>Phoxinus phoxinus</i>)	Pumpkinseed (<i>Lepomis gibbosus</i>)
Dam site								
2007	5	143	221	246	1	10	18	20
2008	73	109	38	251	11	14	36	6
2009	11	96	45	146	2	30	20	17
2010	15	12	234	148	1	25	28	18
2011	8	2	92	162	2	21	15	17
2012	41	1458	773	776	3	20	9	79
2013	93	74	365	473	5	25	37	13
Mean	35.14	270.57	252.57	314.57	3.57	20.71	23.28	24.28
s.d.	35.23	526.06	258.11	233.16	3.55	6.87	10.67	24.56
Control site								
2007	3	1	109	33	1	42	2	9
2008	4	78	37	76	5	20	8	1
2009	7	23	124	267	4	96	96	21
2010	23	336	110	263	4	53	27	14
2011	0	14	30	22	0	19	25	24
2012	0	39	378	88	5	50	13	19
2013	82	140	142	153	3	90	97	9
Mean	17	90.14	132.85	128.85	3.14	52.85	38.28	13.85
s.d.	29.73	118.28	116.27	102.25	1.95	30.53	40.73	8.09

Table S2. Total length (TL), N and C percentages and ratios, and isotope data for species in this study

Species	Date	Site	TL (cm)	N (%)	C (%)	C : N	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$
Catfish	08/08/2013	Control	180	12.27	37.05	3.02	14.97	-16.86
Catfish	04/14/2013	Control	140	9.88	30.62	3.10	15.31	-18.64
Catfish	06/30/2013	Control	195	9.87	29.99	3.04	15.32	-17.26
Catfish	08/25/2013	Control	225	12.02	36.55	3.04	15.37	-16.79
Catfish	06/24/2013	Control	177	11.83	35.67	3.02	15.47	-17.06
Catfish	07/31/2013	Control	140	10.23	31.15	3.05	15.48	-16.93
Catfish	08/29/2013	Control	170	10.17	31.50	3.10	15.54	-18.08
Catfish	05/04/2013	Control	220	10.40	29.39	2.83	15.60	-19.84
Catfish	04/28/2013	Control	200	10.60	31.93	3.01	15.61	-18.61
Catfish	06/01/2013	Control	205	12.41	38.48	3.10	15.62	-18.51
Catfish	04/28/2013	Control	150	10.46	33.24	3.18	15.63	-18.37
Catfish	04/14/2013	Control	180	10.17	30.37	2.99	15.66	-16.44
Catfish	03/16/2013	Control	194	11.14	34.96	3.14	15.69	-17.77
Catfish	08/03/2013	Control	190	13.82	39.27	2.84	15.73	-18.03
Catfish	04/20/2013	Control	165	10.36	32.02	3.09	15.74	-17.81
Catfish	04/28/2013	Control	180	10.82	33.54	3.10	15.75	-17.51
Catfish	08/04/2013	Control	150	12.24	38.12	3.11	15.78	-18.24
Catfish	03/16/2013	Control	229	10.26	31.38	3.06	15.80	-17.07
Catfish	03/16/2013	Control	204	12.62	40.36	3.20	15.81	-18.21
Catfish	04/06/2013	Control	220	11.73	36.00	3.07	15.88	-17.46
Catfish	03/21/2013	Control	164	11.16	34.49	3.09	15.90	-17.93
Catfish	05/10/2013	Control	190	11.96	32.49	2.72	15.93	-18.85
Catfish	05/04/2013	Control	180	10.91	33.10	3.03	15.97	-17.82
Catfish	08/03/2013	Control	227	12.00	39.76	3.31	16.13	-17.72
Catfish	06/11/2013	Control	200	12.79	40.61	3.18	16.21	-19.94
Catfish	03/21/2013	Control	203	12.12	38.14	3.15	16.23	-17.62
Catfish	03/16/2013	Control	212	12.54	39.46	3.15	16.29	-17.99
Catfish	04/17/2013	Control	170	11.90	37.63	3.16	16.59	-19.80
Catfish	06/01/2013	Control	170	12.86	41.17	3.20	16.62	-20.10
Catfish	05/25/2013	Control	140	12.15	38.45	3.16	16.87	-22.30
Catfish	03/16/2013	Control	140	10.13	32.09	3.17	16.95	-19.75
Catfish	03/16/2013	Control	136	9.91	31.03	3.13	17.12	-20.51
Catfish	05/06/2013	Dam	170	10.79	32.96	3.06	14.71	-18.80
Catfish	05/04/2013	Dam	197	12.32	38.38	3.11	15.02	-16.54
Catfish	04/27/2013	Dam	230	12.43	38.70	3.11	15.03	-16.39
Catfish	08/18/2013	Dam	175	11.61	35.30	3.04	15.10	-18.22
Catfish	03/31/2013	Dam	170	12.42	40.42	3.25	15.16	-19.02

Species	Date	Site	TL (cm)	N (%)	C (%)	C : N	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$
Catfish	03/23/2013	Dam	216	10.58	31.96	3.02	15.18	-16.62
Catfish	05/31/2013	Dam	190	11.89	36.84	3.10	15.18	-17.45
Catfish	08/01/2013	Dam	152	10.79	32.98	3.06	15.21	-22.61
Catfish	06/11/2013	Dam	170	10.05	30.90	3.07	15.22	-18.29
Catfish	04/13/2013	Dam	225	10.78	33.21	3.08	15.30	-17.73
Catfish	08/22/2013	Dam	170	11.25	35.17	3.13	15.36	-17.45
Catfish	04/25/2013	Dam	135	11.93	32.29	2.71	15.37	-21.10
Catfish	04/14/2013	Dam	175	11.51	35.86	3.11	15.54	-16.76
Catfish	04/25/2013	Dam	175	11.65	36.17	3.10	15.59	-16.87
Catfish	08/29/2013	Dam	155	9.96	25.83	2.59	15.61	-16.92
Catfish	08/29/2013	Dam	222	11.16	34.13	3.06	15.64	-16.96
Catfish	08/07/2013	Dam	190	10.60	32.44	3.06	15.67	-21.01
Catfish	04/13/2013	Dam	190	14.65	46.48	3.17	15.68	-18.95
Catfish	04/25/2013	Dam	177	11.35	34.97	3.08	15.75	-19.14
Catfish	08/06/2013	Dam	175	9.96	30.67	3.08	15.84	-16.98
Catfish	05/25/2013	Dam	140	11.59	36.93	3.19	15.87	-19.96
Catfish	04/25/2013	Dam	177	9.34	28.24	3.02	15.89	-17.88
Catfish	08/22/2013	Dam	180	11.82	36.75	3.11	15.94	-18.42
Catfish	04/13/2013	Dam	180	12.34	39.44	3.20	15.97	-18.16
Catfish	07/07/2013	Dam	180	11.57	35.71	3.09	16.00	-19.46
Catfish	03/30/2013	Dam	200	13.41	41.48	3.09	16.24	-18.18
Catfish	03/23/2013	Dam	132	11.80	37.52	3.18	16.46	-20.22
Catfish	04/13/2013	Dam	180	11.95	36.61	3.06	16.51	-20.23
Catfish	03/30/2013	Dam	185	11.41	34.11	2.99	16.67	-21.27
Catfish	05/06/2013	Dam	140	13.02	41.43	3.18	16.74	-21.60
Catfish	05/26/2013	Dam	140	10.56	32.55	3.08	16.96	-20.99
Catfish	04/13/2013	Dam	132	10.62	28.18	2.65	17.03	-20.77
Bleak	05/26/2013	Control	Undetermined	11.86	39.66	3.35	14.42	-22.81
Bleak	05/26/2013	Control	Undetermined	12.63	40.67	3.22	11.95	-21.80
Bream	05/26/2013	Control	Undetermined	12.18	39.94	3.28	12.96	-22.80
Chub	05/26/2013	Control	Undetermined	11.51	36.49	3.17	13.64	-20.06
Sea lamprey	05/25/2013	Control	Undetermined	11.26	37.88	3.36	12.23	-16.57
Sea lamprey	05/25/2013	Control	Undetermined	11.19	34.98	3.13	12.90	-15.77
Sea lamprey	05/25/2013	Control	Undetermined	11.08	32.86	2.97	12.92	-16.21
Barbel	05/26/2013	Dam	Undetermined	9.29	32.24	3.47	12.12	-25.54
Bleak	05/26/2013	Dam	Undetermined	11.10	34.98	3.15	12.45	-22.57
Bleak	05/26/2013	Dam	Undetermined	9.98	29.87	2.99	12.98	-22.20
Bream	05/26/2013	Dam	Undetermined	10.82	33.24	3.07	13.18	-22.28

Species	Date	Site	TL (cm)	N (%)	C (%)	C : N	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$
Carp	05/26/2013	Dam	Undetermined	11.51	35.02	3.04	12.93	-23.45
Allis shad	05/25/2013	Dam	Undetermined	11.63	34.18	2.94	11.68	-18.19
Allis shad	05/25/2013	Dam	Undetermined	12.22	36.62	3.00	12.83	-16.96
